

PATENT COOPERATION TREATY
PCT
INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY
(Chapter II of the Patent Cooperation Treaty)
(PCT Article 36 and Rule 70)

REC'D 18 MAY 2005

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Applicant's or agent's file reference 111701	FOR FURTHER ACTION	See Form PCT/IPEA/416
International application No. PCT/AU2004/000760	International filing date (day/month/year) 9 June 2004	Priority date (day/month/year) 9 June 2003
International Patent Classification (IPC) or national classification and IPC Int. Cl. ⁷ G01R 33/343, 33/3415		
Applicant QR SCIENCES LIMITED et al		

1. This report is the international preliminary examination report, established by this International Preliminary Examining Authority under Article 35 and transmitted to the applicant according to Article 36.
2. This REPORT consists of a total of 5 sheets, including this cover sheet.
3. This report is also accompanied by ANNEXES, comprising:
 - a. ☐ (sent to the applicant and to the International Bureau) a total of sheets, as follows:
 - ☐ sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications authorized by this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions).
 - ☐ sheets which supersede earlier sheets, but which this Authority considers contain an amendment that goes beyond the disclosure in the international application as filed, as indicated in item 4 of Box No. I and the Supplemental Box.
 - b. ☐ (sent to the International Bureau only) a total of (indicate type and number of electronic carrier(s)) , containing a sequence listing and/or table related thereto, in computer readable form only, as indicated in the Supplemental Box Relating to Sequence Listing (see Section 802 of the Administrative Instructions).
4. This report contains indications relating to the following items:

<input checked="" type="checkbox"/> Box No. I	Basis of the report
<input type="checkbox"/> Box No. II	Priority
<input type="checkbox"/> Box No. III	Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
<input checked="" type="checkbox"/> Box No. IV	Lack of unity of invention
<input checked="" type="checkbox"/> Box No. V	Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
<input type="checkbox"/> Box No. VI	Certain documents cited
<input type="checkbox"/> Box No. VII	Certain defects in the international application
<input type="checkbox"/> Box No. VIII	Certain observations on the international application

Date of submission of the demand 21 December 2004	Date of completion of the report 29 April 2005
Name and mailing address of the IPEA/AU AUSTRALIAN PATENT OFFICE PO BOX 200, WODEN ACT 2606, AUSTRALIA E-mail address: pct@ipaaustralia.gov.au Facsimile No. (02) 6285 3929	Authorized Officer RICHARD REED Telephone No. (02) 6283 7927

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International application No.
PCT/AU2004/000760

Box No. I

Basis of the report

1. With regard to the language, this report is based on the international application in the language in which it was filed, unless otherwise indicated under this item.
 - ☐ This report is based on translations from the original language into the following language which is the language of a translation furnished for the purposes of:
 - ☐ international search (under Rules 12.3 and 23.1 (b))
 - ☐ publication of the international application (under Rule 12.4)
 - ☐ international preliminary examination (under Rules 55.2 and/or 55.3)
2. With regard to the elements of the international application, this report is based on (*replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report*):
 - ☒ the international application as originally filed/furnished
 - ☐ the description:

pages	as originally filed/furnished
pages*	received by this Authority on with the letter of
pages*	received by this Authority on with the letter of
 - ☐ the claims:

pages	as originally filed/furnished
pages*	as amended (together with any statement) under Article 19
pages*	received by this Authority on with the letter of
pages*	received by this Authority on with the letter of
 - ☐ the drawings:

pages	as originally filed/furnished
pages*	received by this Authority on with the letter of
pages*	received by this Authority on with the letter of
 - ☐ a sequence listing and/or any related table(s) - see Supplemental Box Relating to Sequence Listing.
3. ☐ The amendments have resulted in the cancellation of:
 - ☐ the description, pages
 - ☐ the claims, Nos.
 - ☐ the drawings, sheets/figs
 - ☐ the sequence listing (*specify*):
 - ☐ any table(s) related to the sequence listing (*specify*):
4. ☐ This report has been established as if (some of) the amendments annexed to this report and listed below had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).
 - ☐ the description, pages
 - ☐ the claims, Nos.
 - ☐ the drawings, sheets/figs
 - ☐ the sequence listing (*specify*):
 - ☐ any table(s) related to the sequence listing (*specify*):

* If item 4 applies, some or all of those sheets may be marked "superseded."

Box No. IV Lack of unity of invention

1. ☒ In response to the invitation to restrict or pay additional fees the applicant has:

☐ restricted the claims.

☒ paid additional fees.

☐ paid additional fees under protest.

☐ neither restricted nor paid additional fees.

2. ☐ This Authority found that the requirement of unity of invention is not complied with and chose, according to Rule 68.1, not to invite the applicant to restrict or pay additional fees.

3. This Authority considers that the requirement of unity of invention in accordance with Rules 13.1, 13.2 and 13.3 is:

☐ complied with.

☒ not complied with for the following reasons:

Claims 1 to 3, 11, 12 to 21 (depending from claim 11), and 27 relate to a first invention regarding a coil having a specific form. Claims 4 to 10, 12 to 21 (not depending from claim 11), 22 to 26, 28 and 29 relate to a second invention of a multiple sub-units arranged along a path along which items pass and processing signals received from the sub-units for detection of substances. The second invention has no reference to the specific coil form of the first invention and so there is no shared common special technical feature. Accordingly the indicated sets of claims lack unity of invention.

4. Consequently, this report has been established in respect of the following parts of the international application:

☒ all parts.

☐ the parts relating to claims Nos.

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Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Claims 1 to 27	YES
	Claims None	NO
Inventive step (IS)	Claims 1 to 27	YES
	Claims None	NO
Industrial applicability (IA)	Claims 1 to 27	YES
	Claims None	NO

2. Citations and explanations (Rule 70.7)

The associated International Search Report cited:

D1 = EP 1416291 A2 (ANALOGIC CORPORATION) 6 May 2004

Within the available time and resources and the knowledge of the examiner, no document was found that was considered sufficiently relevant to claims 1 to 3, 11 and 27. Accordingly, these claims are considered to be novel and involve an inventive step. Further, these claims define an invention that has industrial applicability to detection coils for NQR detection systems.

Document D1 has a priority date earlier than but was published after the subject claims. The examiner has no basis to conclude the invalidity of the priority claim of the subject application. Accordingly all claims are considered to be novel and involve an inventive step.

Document D1 teaches a system of sub-units and a conveyor for examination of items. Excepting the validity of the priority claim, claims 4 to 6, 8 to 10, 12 to 15, 17, 22 to 26, 28 and 29 would lack novelty in light of D1.

Document D1 does not explicitly teach tuning detection coils to high and low frequency bands. The coils are taught to be tunable. Tuning coils to high and low frequency bands to optimise frequency response for multiple detection is an obvious step over the teaching of D1. Accordingly, excepting the validity of the priority claim, claim 7 is novel but would lack an inventive step.

Document D1 does not mention that the conveyor has a vertical path. Conveyors are well known to travel in all directions and it would have been obvious for the conveyor to take a vertical configuration if desired. Accordingly, excepting the validity of the priority claim, claim 16 is novel but would lack an inventive step.

Document D1 does not mention a common electrical shield. Such shields are well known to the art. Accordingly, excepting the validity of the priority claim, claim 18 is novel but would lack an inventive step.

Document D1 does not mention waveguide feeds for the coils. Waveguides are well known to the art. Accordingly, excepting the validity of the priority claim, claims 19, 20 and 21 are novel but would lack an inventive step.

The claimed invention has industrial applicability in the field of, *inter alia*, NQR detection coils and simultaneous detection by eg NQR methods of diverse materials.

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Box No. VI Certain documents cited

1. Certain published documents (Rule 70.10)

<u>Application No.</u> <u>Patent No.</u>	<u>Publication date</u> <u>(day/month/year)</u>	<u>Filing date</u> <u>(day/month/year)</u>	<u>Priority date (valid claim)</u> <u>(day/month/year)</u>
EP 1416291	6/5/2004	30/10/2003	30/10/2002

The above document has a priority date earlier the subject application. However it was published after the subject claims. The examiner has no basis to conclude the invalidity of the priority claim of the subject application. Accordingly all claims are considered to be novel and involve an inventive step.

2. Non-written disclosures (Rule 70.9)

<u>Kind of non-written disclosure</u>	<u>Date of non-written disclosure</u> <u>(day/month/year)</u>	<u>Date of written disclosure</u> <u>referring to non-written disclosure</u> <u>(day/month/year)</u>
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